THE HIGHWAY: AN INSTRUMENT FOR ALTERING LAND USE (A CASE FOR ATLANTA)

A THESIS

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR

THE DEGREE OF MASTER OF ARTS

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CHAPTER I

A BRIEF HISTORY OF THE ROAD

The need and construction of efficient roads are not contemporary phenomenons. The Romans had an elaborate road building system three centuries before the beginning of the Christian Era. Roads were built to facilitate the rapid movement of troops from place to place during war time and to make trade possible between various divisions of the Roman Empire.[1] Roads were built and maintained by the expense of the general government.[2] The government also regulated the flow of traffic on Roman roads. During the first century A.D. the municipal government of Rome relieved street congestion by restricting vehicular traffic (except chariots and state vehicles) to night hours.[3]

After the fall of Rome, road construction was virtually at a standstill. During that time trade also declined. Roman highways for a thousand years remained the mainstay of Western Europe, but the roads deteriorated badly from lack of maintenance. It was not until the latter part of the seventeenth century that modern highway systems were being created. This attempt was stimulated by the need to provide better

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[1]S. W. McCallie, Geological Survey of Georgia, A Preliminary Report on the Road and Road Building Materials of Georgia, Bulletin No. 8, (Georgia, 1901), p. 10.

[2]John B. Rae, The Road and the Car in American Life, (Cambridge, Mass.: The M.I.T. Press, 1971), p. 8.

[3]John W. Dyckman, "Transportation in Cities," in Cities, Scientific American Book, (New York: Alfred A. Knopf, 1966), 133.

accommodation for wheeled traffic.[1]

The development of roads was a relatively slow process in the United States. Roads utilized during the Colonial period were extensions of Indian trails. The desire to communicate was a major factor in road building, especially the need for mail delivery where transportation was not readily available.[2] Road construction during the 1700's was exclusively a local affair and roads were financed by local property tax.[3] As the use of carts and wagons increased substantially during the latter part of the eighteenth century the need for a more extensive road system was paramount. Although this growth stimulated a demand for highways there was a constant resistance from operators of the packhorse train.[4]

It was not until the United States became an independent nation that its need for a highway system was recognized in the constitutional provision giving Congress the power to establish post offices and post roads. This clause did not give the federal government the permission to build roads, it designated state and local government to construct highways to be used as mail routes.[5]

As the country and its internal commerce continued to grow there was an increasing demand for more than local roads. Farmers demanded

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[1]Rae, op. cit., pp. 8-10.

[2]Charles Luna, The UTU Handbook of Transportation in America, (New York: Popular Library, 1971), p. 8.

[3]Poyntz Tyler, ed., American Highways Today, (New York: H. W. Wilson Company, 1957), p. 46.

[4]Rae, The Road and the Car in American Life, p. 13.

[5]Ibid., pp. 14-15.

better roads to get their products to market.[1] The demand for new and better roads was overwhelming in the 1800's and early 1900's. This was due to the invention of the internal combustion engine and the birth of the automotive industry which occurred simultaneously with the Industrial Revolution.[2]

During the Industrial Revolution many different modes of transport for passengers and goods appeared on the American scene. For example, passenger modes of transport appearing chronologically were the omnibus, the horse car, the cable car, the electric car, the motor bus and the trolley bus, the ferry, rapid transit (subway, elevated and monorail, commuter and interurban railroads), and then the automobile.[3]

The birth of the automobile had a significant impact on cities and the growth of the highway system. Where public passenger transport enabled people to live further away from their place of work, recreational activities and other social gatherings, the automobile had more advantages. The automobile no longer restricted the travelers route or time of departure and arrival.[4] City boundaries and residential areas began to expand. Technology and industrialization introduced many new occupations, and as a result incomes increased substantially, giving the American people a new way of life.[5]

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[1] Ibid.

[2] Luna, The UTU Handbook, p. 9.

[3] George M. Smerk, Urban Transportation: the Federal Role, (Bloomington: Indiana University Press, 1965), pp. 17-29.

[4] Luna, op. cit., p. 16.

[5] J. John Palen and Karl H. Flaming, eds., Urban America: Conflict and Change, (Atlanta: Holt, Rinehart and Winston, Inc., 1972), p. 88.

Increased incomes for the general population was the main determinant for increased automobile ownership. The automotive industry stimulated the economy according to the principle of supply and demand. The continual growth of the automotive industry provided the supply, and increasing population and incomes stimulated the demand.[1] Simultaneously, the demand for new and better roads was recognized by the passage of the Federal-Aid Act of 1916. This legislation instructed each state seeking a grant for highway construction to organize a state highway department.[2] Road construction under this Act was prohibited to urban areas with populations of 2,500 or more and it was stipulated that new roads constructed must be rural post roads. The Bureau of Public Roads was established to administer grants to states qualifying for aid.[3]

After World War I the automotive industry continued to grow, the Ford Motor Company produced more than a million automobiles in 1920.[4] As road construction greatly expanded during the 1920's the interstices of the metropolitan areas were being filled in.[5] During this time people became more dependent upon the automobile because of its flexibility. Simultaneously, the highway created a demand for industrial and commercial land development outside the central business district and this, in turn, opened a new market for residential property.[6]

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[1]Dennis Sobin, "Theories of Community Composition and Change," Land Economics, Vol. 67, No. 2 (May, 1971), 206.

[2]Luna, UTU Handbook, p. 9.

[3]Smerk, Urban Transportation, p. 119.

[4]Luna, op. cit.

[5]Charles Glaab and Theodore Brown, A History of Urban America (London: The Macmillan Company, 1967), p. 278.

[6]Tyler, American Highway Today, p. 55.

After phenomenal growth of metropolitan areas, the Federal Government recognized the need for urban road development. The passage of the Federal Highway Act of 1944 was the first time federal funds were designated for urban areas. The 1944 Act stipulated that roads should be designed to connect metropolitan areas, cities, industrial centers and to serve for the national defense. The Act provided exclusive federal-aid to municipalities and urban places with populations over 5,000, this was to facilitate congested traffic.[1]

The 1944 Act designated 400,000 miles of interregional highway construction.[2] During construction and upon completion of the interregional highway system there was a wide spread dispersal of both residential and industrial development made possible by motor vehicles. Since the completion of the interregional highway system there has been a concentration of privately owned vehicles for urban travel and highway construction has been a continuing process to accommodate the automobile.[3]

The largest public works project in the United States has been the development of the National System of Interstate and Defense Highways. This project was originally proposed by President Eisenhower in 1954 and it was to be a chain of roads serving interstate traffic. These roads were to bypass cities, enabling motorist to travel from one corner of the country to the other at high speed without stoping for a traffic light.

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[1]Charles Dearing and Wilfred Owen, The National Transportation Policy, (Washington, D.C.: Brookings Institution, 1949, pp. 110-111.

[2]Helen Leavitt, Superhighway-Superhoax, (New York: Doubleday & Company, Inc., 1970), p. 303.

[3]Wilfred Owen, The Metropolitan Transportation Problem, (Washingtion, D. C.: The Brookings Institution, 1966), pp. 27-28.

A provision in this proposal stated that there would be no massive highway construction in our cities. The National System of Interstate and Defense Highways project became official upon the passage of the 1956 Highway Act. Presently, this Highway System is financed through the Highway Trust Fund, effective 1958. All federal taxes on motor vehicles, gasoline, oil and ancillary equipment are channeled into this fund and all taxes collected are devoted solely to highway construction. From this fund the Federal Government has financed 90 percent of all Interstate Highway construction. In addition, the 1956 Highway Act provided for public hearings in the event that an Interstate road was planned to bypass or go through a community. It is required of the State Highway Department to measure public response and adapt their plans accordingly.[1]

Purpose of the Study

> The rise of metropolitan centers has undoubtedly been accompanied by significant changes in social patterns. Few urban studies have directly investigated the place of neighborhood or local community life within the large metropolis....Studies have shown that there is a decline in urban neighborhood as a social entity because urban residents were becoming less locally self-sufficient in their use of facilities, coming rather to depend upon facilities located throughout the city.[2]

The purpose of this study is twofold; first, to describe the National System of Interstate and Defense Highways in Atlanta and its relationship to other land uses. Secondly, this is a study of a community in Atlanta and its relationship to the land uses and/or facilities avail-

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[1]Grant S. McClellan, ed., Land Use in the United States: Exploitation or Conservation, The Reference Shelf Collection, Vol. 43, No. 2 (New York: H. W. Wilson Company, 1971), pp.74-77.

[2]Jack P. Gibbs, ed., Urban Research Methods, (Princeton, New Jersey: D. Van Nostrand Company, Inc., 1961), p. 220.

able in the city and the community.

Method of Data Collection

There will be various methods of data collection in this study. Enumerated census data, reports issued by the Atlanta Regional Commission, City Planning Reports, maps, and interviews will be used.

CHAPTER II

THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS IN ATLANTA

> The purpose of transportation is to bring people or goods to places where they are needed, and to concentrate the greatest variety of goods and people within a limited area, in order to widen the possibility of choice without making it necessary to travel.[1]

The role of transportation is that of shaping the development of a particular area for the needs of the inhabitants in that area. The highway system has developed contrary to this theory. It has created a dispersal of people and goods occupying specialized areas. More specifically, the highway system has created metropolitan areas that are interdependent upon the surrounding areas, and these metropolitan areas have become transportation centers.

Atlanta, Georgia is considered a transportation center in the Southeastern United States because of its strategic location. As a result of this strategic location, trade and commerce have flourished. As a further consequence, owners, general managers, branch and regional offices have tended to locate in Atlanta in order to be in close proximity with each other. Being the capitol of Georgia has added impetus to Atlanta's importance as a transportation center. Businesses, industry and institutions have come to Atlanta in order to provide goods and

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[1]Lewis Mumford, The Highway and the City, (New York: New American Library, 1963), p. 246.

services for those persons congregated in Atlanta as a result of the aforementioned. Due to this growth, Atlanta's boundaries have multiplied more than five times its original city radius.[1] (Figure 1 is an illustration of Atlanta's strategic location in the United States.)

Transportation is invariably an important asset for strategically located Atlanta. The entire city of Atlanta is a terminal for the surrounding areas.

> A terminal is any facility providing for the delivery, receipt and temporary storage of freight or the embarkation of passengers and providing for temporary storage of the vehicle itself.[2]

The transportation system of Atlanta acts as a circulatory system bringing people and goods into the city and providing the means by which they can move freely from state to state.[3] Due to Atlanta's location it has been a growing metropolis, with other variables responsible for its continuous growth. Population and employment have increased tremendously during the last two decades and they have been influential in determining the growth of the city.

The figures in Table 1 are indications of the phenomenal growth of Atlanta and its surrounding areas. Figure 2 is an illustration to show the geographical relationship between the Standard Metropolitan Statistical Areas (SMSA) and the city of Atlanta. As one can determine from the increase column under percentages in Table 1, increases in Atlanta

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[1] C. A. McMahan, The People of Atlanta: A Demographic Study of Georgia's Capitol City, (Athens: University of Georgia Press, 1950), p. 195.

[2] William Goodman and Eric Freund, eds., Principles and Practices of Urban Planning, (Washington, D. C.: International City Managers' Association, 1968), p. 146.

[3] Ibid., p. 137.

Figure 1

ATLANTA'S LOCATION WITHIN THE UNITED STATES

TABLE 1

THE POPULATION OF ATLANTA AND ATLANTA
STANDARD METROPOLITAN STATISTICAL AREAS* 1950 TO 1970

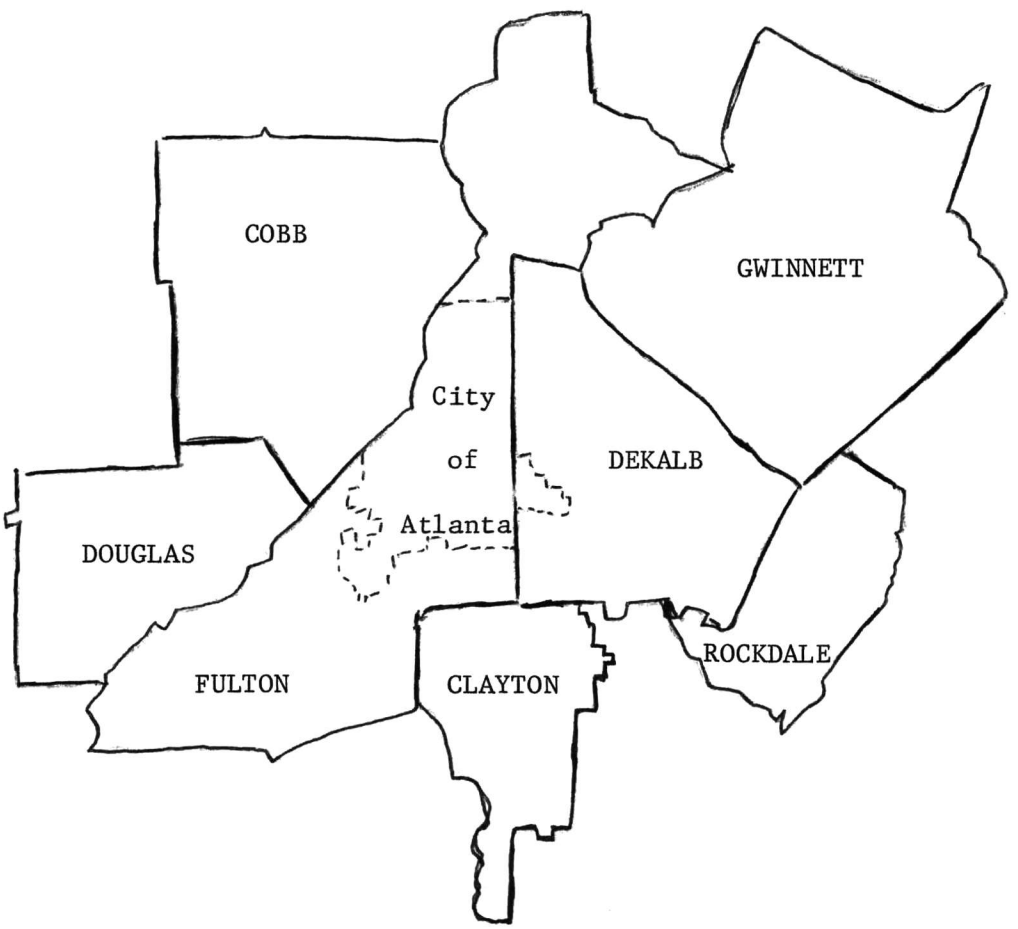
City of Atlanta					Atlanta SMSA				
		Increases					Increases		
Year	Number	Years	Number	Per-cent	Year	Number	Years	Number	Per-cent
1950	331,314	1950-1960	156,141	47	1950	126,989	1950-1960	290,199	40
1960	487,455	1960-1970	9,518	2	1960	1,017,188	1960-1970	372,976	37
1970	496,972	1950-1970	165,659	50	1970	1,390,164	1950-1970	663,175	91

*Atlanta Standard Metropolitan Statistical Area includes all of Clayton, Cobb, Dekalb, Fulton and Gwinnett Counties in Georgia.

SOURCE: The population figures for 1950 through 1970 were taken from official publications of the United States Bureau of the Census.

Figure 2

THE GEOGRAPHICAL LOCATION OF
ATLANTA WITHIN THE SMSA 1970



SOURCE: Atlanta Regional Planning Commission

SMSA are more pronounced between the twenty year span, 1950-1970, than in the city proper. This particular growth in the counties' population can be attributed to many factors that are in fact responsible for the emergence of metropolitan centers. Industrial, commercial and residential dispersion and public transit are all contributory factors to the growth of once hinterlands, now developed areas of the city.

> As the population grows there is a growing competition for space, both within the center and on the transportation facilities leading to a displacement from the center of all those primarily dealing with goods, manufacturing and warehouses, but also retail stores, consumer services and residence.[1]

This suggest that there are standards and goals a growing metropolis must accomplish. With increasing population there must be an increase of goods produced and services rendered to accommodate the needs of the inhabitants. In order to produce enough goods and services there must be new markets opened specifically for these purposes.

According to the figures in Table 2 Atlanta has had a continuous growth of its labor market along with its population. From 1950 to 1970 Atlanta SMSA population increased ninety-one percent and employment increased 129 percent. Although Atlanta's population increased only two percent from 1960 to 1970 (see Table 1) the Atlanta SMSA population from 1960 to 1970 increased thirty-five percent more than the city of Atlanta. According to Larry Smith, a real estate market analyst (1957), as population growth of the metropolitan areas take place there is a trust for the development of industrial, commercial and residential land uses outside the city. Smith also contends that increasing populations and

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[1]Hans Blumenfeld, "The Urban Pattern," in Urban Revivals: Goals and Standard, The Annals of the American Academy of Political and Social Science, Vol. 352, (Philadelphia, March 1964), 79.

TABLE 2

ATLANTA STANDARD METROPOLITAN STATISTICAL AREA EMPLOYMENT FIGURES FOR PERSONS 16 YEARS AND OVER 1950 TO 1970

		Increases		
Year	Number	Years	Number	Percent
1950	257,000	1950-1960	113,000	44
1960	370,000	1960-1970	217,708	59
1970	587,708	1950-1970	330,708	129

SOURCE: U. S. Bureau of the Census 1950 to 1970.

employment stimulate land use development, but only a viable transportation system can make development a reality.[1] The automobile has been most influential in developing land use patterns that prevail in our metropolitan areas today. Although our cities are an accumulation of different land use patterns (residential, commercial, industrial, educational, etc.) that were influenced by economic, social, political and technological factors, travel has prevailed as a constant condition of everyday living.[2] Travel is considered a constant because without travel the aforementioned factors that have influenced land use patterns would not have had an effective impact. Through automotive transporta-

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[1]Larry Smith, "The Highways and Competitive Interrelationships Within Urban Areas," The New Highways: Challenge to the Metropolitan Region, Technical Bulletin No. 31, (Washington, D. C.: Urban Land Institute, November 1957), 31.

[2]Goodman and Freund, ed., Principles and Practices of Urban Planning, p. 137.

tion the interchange of ideas and goods has greatly accelerated.[1]

If population and employment are essential variables for influencing land use development, and travel is a constant under any condition, one would expect automobile ownership to increase in those geographical areas that have phenomenal growth in population along with employment growth. (Examine the increase percentages in Table 1 once more.) If Atlanta SMSA population increased thirty-five percent more than the population of Atlanta between 1960 and 1970 one would expect phenomenal increases in automobile ownership in those areas.

Table 3 reveals increases in automobile ownership between 1950 and 1970, with Clayton county having a 951 percent increase from 1950 to 1970. Increases are more pronounced in the counties than in the city. Topographically most of Atlanta's city limit boundaries are located within Fulton county. (See Figure 2 for the exact geographical location of Atlanta.) Within the twenty year span (1950-1970) Fulton county only had a 131 percent increase in automobile ownership.

Automobile ownership is a significant factor in the relationship between place of work and place of residence. Those persons living further away from their place of work tend to own automobiles more frequently than those persons who are in close proximity to their place of work.[2] Population and automobile ownership increases affect travel patterns, thus making it necessary to develop new highways to accommodate these increases.

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[1]Charles Taff, Commercial Motor Transportation, (Homewood, Illinois: Richard D. Irwin, Inc., 1955), p. 3.

[2]George Rogers Taylor, "Building an Intra-urban Transportation System," Allen Wakstein, (ed.), The Urbanization of America: An Historical Anthology, (Atlanta, Ga.: Houghton Mifflin Company, 1960), p. 128.

TABLE 3

AUTOMOBILE REGISTRATION FOR ATLANTA
STANDARD METROPOLITAN STATISTICAL AREAS 1950 TO 1970

	Years			Increases					
County	1950	1960	1970	1950-1960	Percent	1960-1970	Percent	1950-1970	Percent
Clayton	6,483	21,232	68,190	14,749	227	46,958	221	61,707	952
Cobb	17,379	50,911	136,779	33,532	193	85,868	169	119,400	687
Dekalb	43,872	113,578	266,389	69,706	159	152,811	134	222,517	507
Fulton	147,020	227,674	339,719	80,654	55	112,045	49	192,699	131
Gwinnett	8,230	18,869	51,402	10,639	129	32,533	172	43,172	524

SOURCE: Figures were acquired from Mrs. L. Cox, Bookkeeping-Accounting Department, Motor Vehicle Unit, Atlanta, Georgia.

The Highway System in Atlanta was planned according to travel demands created by the automobile. The first comprehensive transportation plan for Atlanta took under consideration future growth in traffic volume, population and types of spatial distribution and the amount of transportation they will demand.[1] It was estimated in the Lochner Report (1946) that the population of Atlanta will be approximately 750,000 by 1970, the estimate was short of the actual population by 640,164 (see Table 1). The transportation plan was planned under the assumption that the choice of industrial sites for future growth in Atlanta will be located in semi-rural areas. This industrial growth will generate a great deal of highway traffic, and in time will cause continuous dispersal of the population.

Land use facilities existing in Atlanta (1946), was the most influential factor in the transportation plan. Figure 3 is a map of Atlanta's land uses existing in 1946. Atlanta had little space remaining for land use development and with increasing traffic volumes entering the city every day, a transportation plan was needed to accommodate the traffic volumes, thus making recommendations for altering land use.

The plan implemented for highway development was based on traffic volume. According to the Lochner Report, the heaviest movement of traffic was found to be in a north-south direction and the largest amount of intracity traffic was found between the northwest and south sections.

The Interregional Highway Committee proposed interstate routes to

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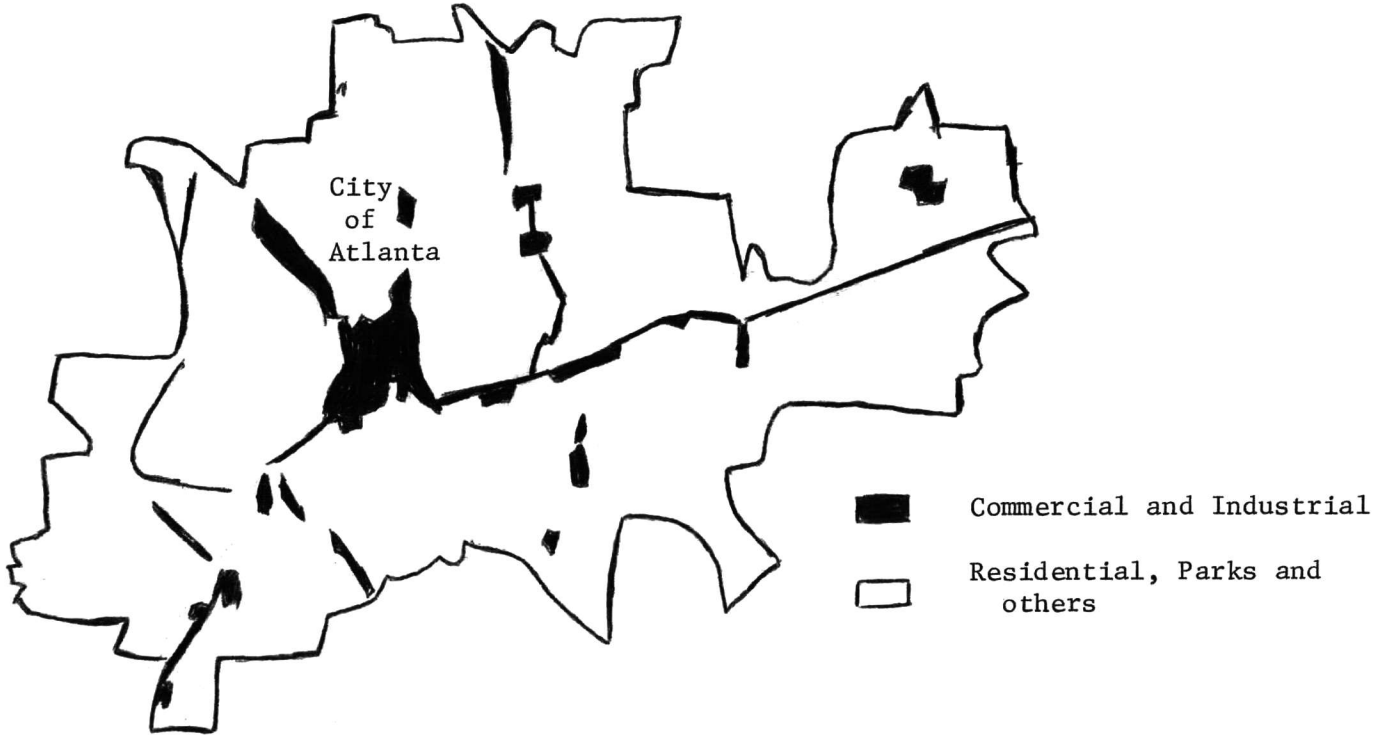
[1]H. W. Lochner and Company and DeLeuw, Cather and Company, Highway and Transportation Plan for Atlanta, Georgia. Prepared for the State Highway Department of Georgia and the Public Roads Administration, Federal Works Agency, (Chicago, Illinois, January 1946), p. 1.

FIGURE 3

LAND USE MAP OF ATLANTA, GEORGIA (1946)



SOURCE: Lochner Report, p. 2.

be radiated from Atlanta northeasterly towards Spartanburg, northwesterly toward Chattanooga, westerly towards Birmingham, southwesterly towards Montgomery and southeasterly through Macon to Florida (see Figure 4). The purpose of the proposed interstate routes was to demonstrate a way to serve the city's local traffic and to serve the greatest feasible number of vehicles entering and leaving the city from all directions.[1] Figure 5 is an illustration of the official interstate routes planned from the Lochner Report. As one can determine from the illustration the plan was planned to penetrate the heart of the Atlanta Metropolitan area. Along with highway plans, improvements for streets, parking facilities, and public transit were to be implemented.

The implementation of the original interstate highway plan for the Atlanta Metropolitan area has been the most influential factor in shaping the existing travel patterns in the city. Any major change in the technique of transportation or in the location and capacity of transportation arteries will have profound impact upon the form size and character of the city.[2] The tremendous growth of automobile ownership has given Atlanta the character of congested traffic. Population growth has altered the size and form of Atlanta. The character, form and size of Atlanta are influenced by the ever growing highway system.

During construction and upon completion of the original interstate highway plans there have been additional highway plans for Atlanta.

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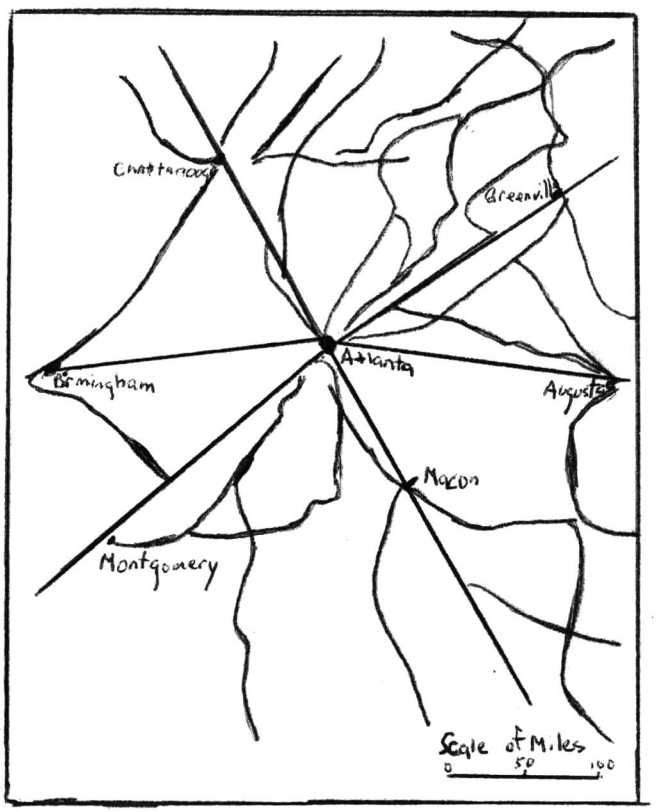
[1] Lochner Report, p. 9.

[2] Edward A. Ackerman, "The National Environment of Urban Growth and Highway Construction," The New Highways: Challenge to the Metropolitan Region, Technical Bulletin No. 31, (Washington, D. C.: Urban Land Institute, November 1957), 7.

FIGURE 4

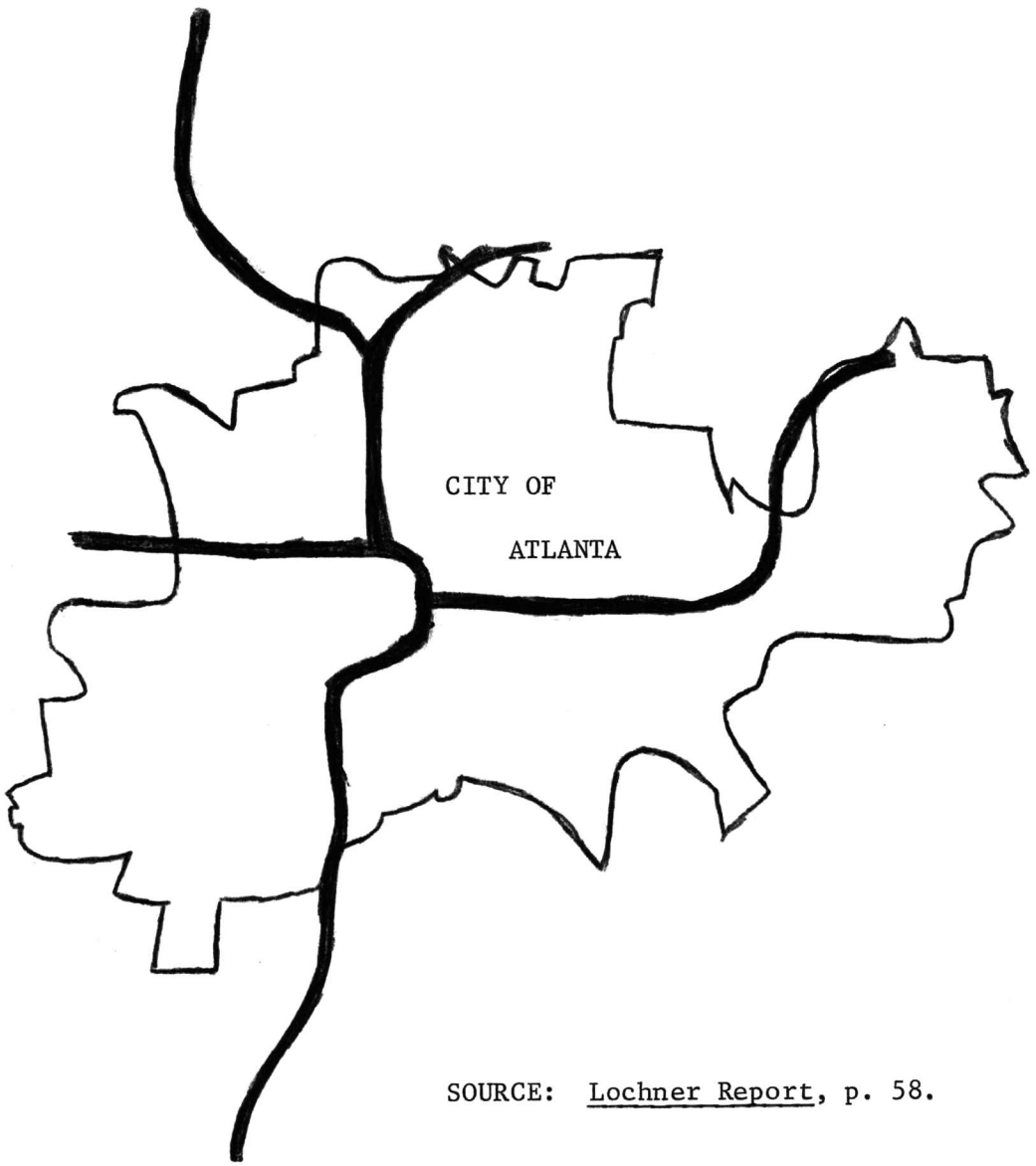
ROUTES PROPOSED FOR THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS



SOURCE: Lochner Report, p. 9.

FIGURE 5

ORIGINAL PLANNED ROUTES FOR THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAYS IN ATLANTA (1946)



SOURCE: Lochner Report, p. 58.

These plans were all based upon the assumption of increased traffic volume, due to increased employment, automobile ownership and population. The converging of expressways from six directions into Atlanta has increased its effective trading, shopping and commuting areas and it has placed rapid traffic and land use pressures on the central zone of the city. Atlanta is a well established center with congested traffic conditions that will be accommodated by additional expressways converging on the existing highway system. The Interstate Highway System makes Atlanta a growing hub for truck transport and private automobile travel that will be influential in the future growth and planning of the highway system. (Figure 6 is an illustration of existing highways in Atlanta.)

City planning is very important for a growing metropolis and the governing officials of Atlanta realized this when the Atlanta Planning Commission was organized in the 1920's and the Atlanta Region Metropolitan Planning Commission (ARMPC) was organized in 1960, as an expansion and organizational modernization of the Metropolitan Planning Commission (MPC) created in 1947. MPC planners have based their recommendations upon comprehensive travel surveys (interviews with drivers) and land use inventories.[1]

Upon the passage of the Federal Highway Act of 1962, requiring urban areas to establish comprehensive transportation plans, the highway-oriented Atlanta Area Transportation Study (AATS) was to include all modes of transportation and to be concerned with land use and economic-social impacts. This led to the merger of the Metropolitan Atlanta

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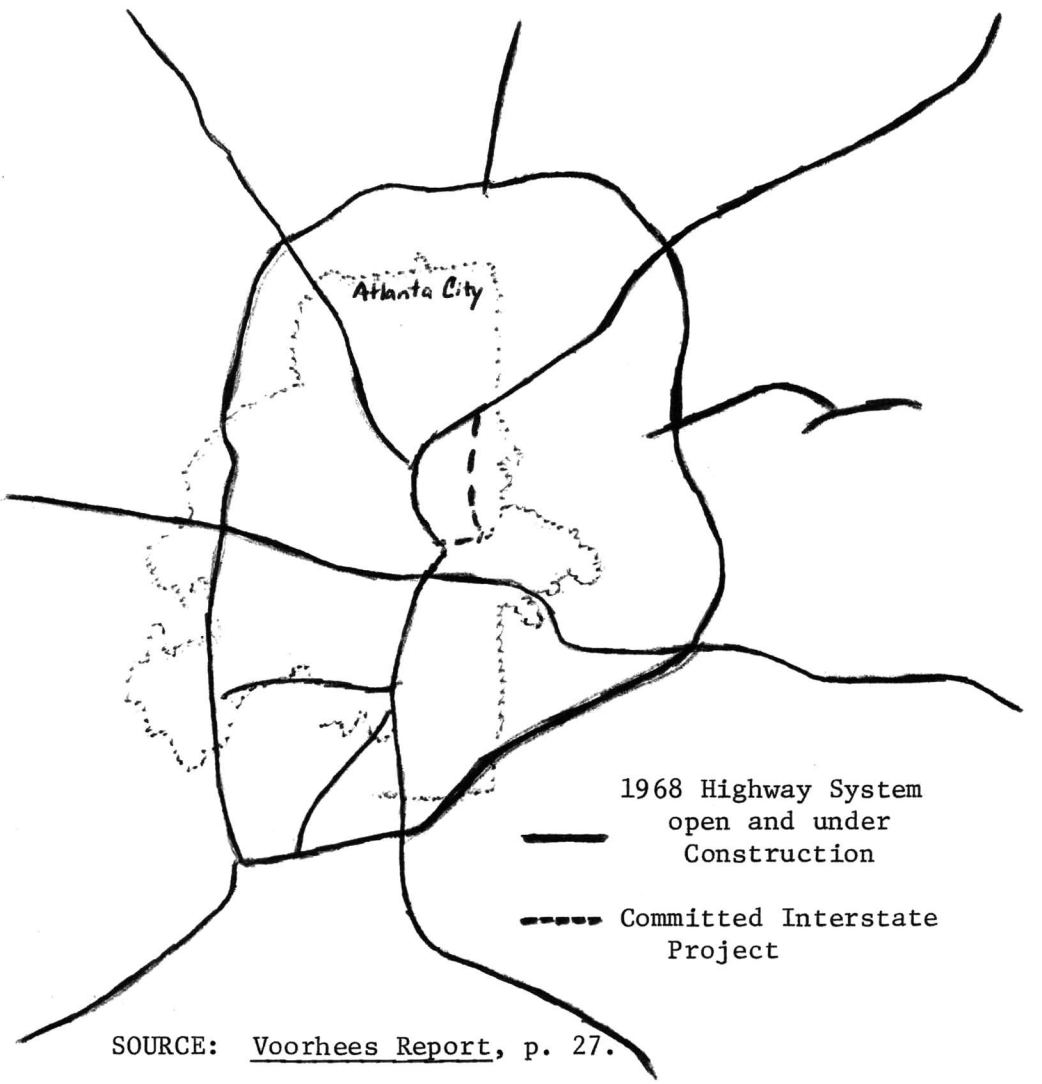
[1]Alan M. Voorhees and Associates, Development and Evaluation of a Recommended Transportation System for the Atlanta Region. Prepared for AATS, (McLean, Virginia: Westgate Research Park, January, 1971), p. 36.

FIGURE 6

THE NATIONAL SYSTEM OF INTERSTATE AND DEFENSE HIGHWAY IN ATLANTA 1968



SOURCE: Voorhees Report, p. 27.

Rapid Transit Authority (MARTA) with AATS after its establishment in 1965.[1]

In 1969 the ARMPC prepared its first analyses and preliminary plans for 1988 land use in the region. These analyses were to serve as a general guideline for future public service programs. The goals of developing regional transportation plans, according to ARMPC, requires a balancing of transportation objectives with total community objectives. Including objectives broader than transportation objectives is not a new development, but the increased emphasis on other factors is relatively new.[2] Considering land use and economic-social factors along with traffic volume should result in more effective planning.

> The basic steps in the transportation planning process...are organizing, stating the objectives, obtaining the information, preparing and evaluation land use and transportation plans within the frame work of the objectives, selecting the best plan, and working for adoption and implementation.[3]

The ARMPC has adopted goals for the regional process. Some of them are listed below:

1) New urban development areas needed to accommodate regional growth should be clustered in locations where conflict between incompatible activities can be prevented, and necessary supporting services can be provided economically.

2) Established development areas should be conserved, rehabilitated or redeveloped, by appropriate public and private action, to assure their maintenance as economically productive and socially desirable parts of the metropolitan community.

3) Orderly development of the region should be fostered by a

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[1] Ibid., p. 37.

[2] Voorhees Report, p. 39.

[3] Goodman and Freund, (eds.), Principles and Practices of Urban Planning, p. 153.

balanced transportation system providing appropriate levels of accessibility throughout the urban area.

4) Develop a transit system which will provide adequate service in terms of reliability, travel times and opportunies for those who, by reason of age, poverty, and etc., cannot or do not drive.

5) To the extent feasible, within the constraints of cost and community disruption, provide a highway system which will permit travel throughout all portions of the region.

6) Provide a transit system which will provide an alternative means of travel in those areas which have highway congestion. In particular, provide additional access to the Central Business District.

7) Focus highway and transit accessibility so that centers of development can be encouraged at transportation "nodes."[1]

ARMPC has based the transportation plan upon the population estimate, for 1983, of 2,000,000. A land use plan for 1983 has been planned as the consequence of the population projection. Included in the plan are plans for developing new travel-ways (expressways, rapid transit and street improvements), and land for development and redevelopment. The following chapter is a graphic description of Atlanta's planning region, specifically the BOND Community, as described by the "1983 Land Use Plan," and "Planning Atlanta: 1970."

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[1]Voorhees Report, pp. 40-41.

CHAPTER III

THE BOND COMMUNITY

AMRPC has predicted an increase in traffic volume due to increases in population, employment and automobile ownership for the future growth of Atlanta. Planners have analyzed the existing transportation system in terms of trips generated to and from work, population, employment and automobile ownership. Recommendations for the 1983 transportation plan have been coordinated with the current transportation system, thus making additional highway facilities an essential feature for the future transport system in Atlanta.

The solution for a viable transportation system can no longer be based upon traffic capacity, depending upon the automobile, but on the ability to develop urban communities in which alternative transportation modes are possible. The purpose of the Atlanta land use plan for 1983 is to make specific recommendations for community development and for a viable transportation system that will be compatible for effective transport and desirable community living.

> The 1983 plan seeks optimum use of the land for the community and the individual. A general improvement of the living environment includes the physical, social, economic, education, and cultural aspects. Among these the physical setting, the use of the land is the most tangible and the one that provides a setting for the other aspects of human life. The physical goals are the primary responsibility of the land use plan.[1]

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[1]Planning and Development Committee, 1983 Land Use Plan, (Atlanta, Georgia: Department of Planning, 1970), p. i.

Land use regulates the types of activities in the community and hence the use patterns that emerge.[1] The 1983 plan designates the type, amount and distribution of land uses throughout the city of Atlanta.

Atlanta is divided into eight planning areas based upon their geographic location from the central core of the city. (Figure 7 is an illustration of the study areas and their sub-areas.) Each area was examined to determine desirable land use alternatives that will foster the greatest economic potential. The planning committee made recommendations for redevelopment of lands not developed to their fullest economic potential,in relationship to their accessibility to the present transportation system (see Figure 8). Lands for redevelopment are in close proximity with the existing highway system and they are located predominately in the central core study area. Redevelopment of the central core, according to the planning committee, is a necessary development to preserve Atlanta's position as a commercial center of Southeastern United States. Lands in the south, west and northwest sections of the city are predominately vacant or underdeveloped lands. These lands are considered basic land sources for new development, that will be used for low density development, such as residential and residential related facilities.

A thoroughfare plan is to accompany plans for community development that will provide routes for convenient travel through and around the city and smooth access entering and leaving the city. Areas subject for redevelopment will be affected by the Community Improvement Program.

A major consideration in selecting a location for redevelopment is

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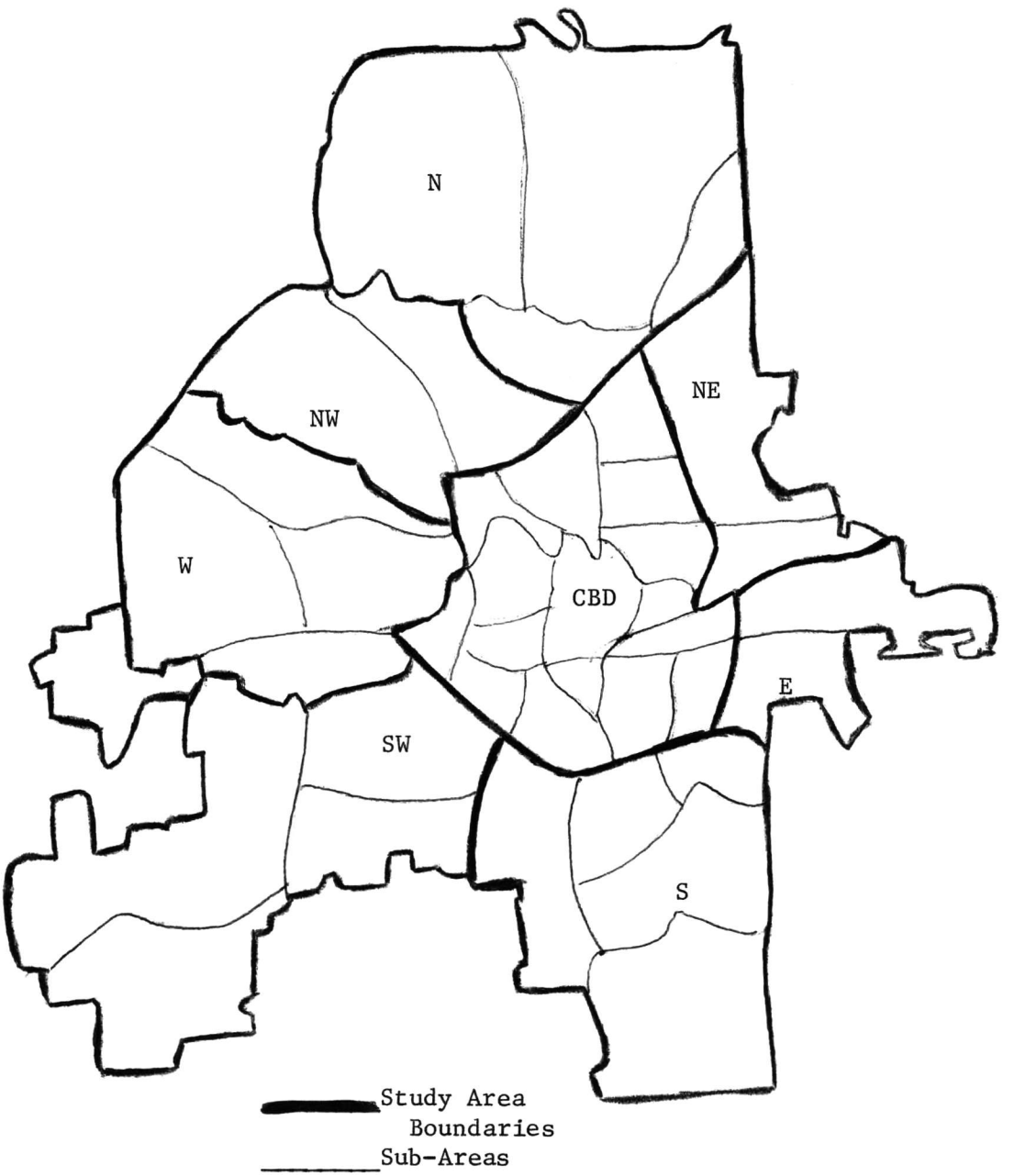
[1]Stuart Chapin, Jr., Urban Land Use Planning, (Urbana: University of Illinois Press, 1965), p. 3.

FIGURE 7

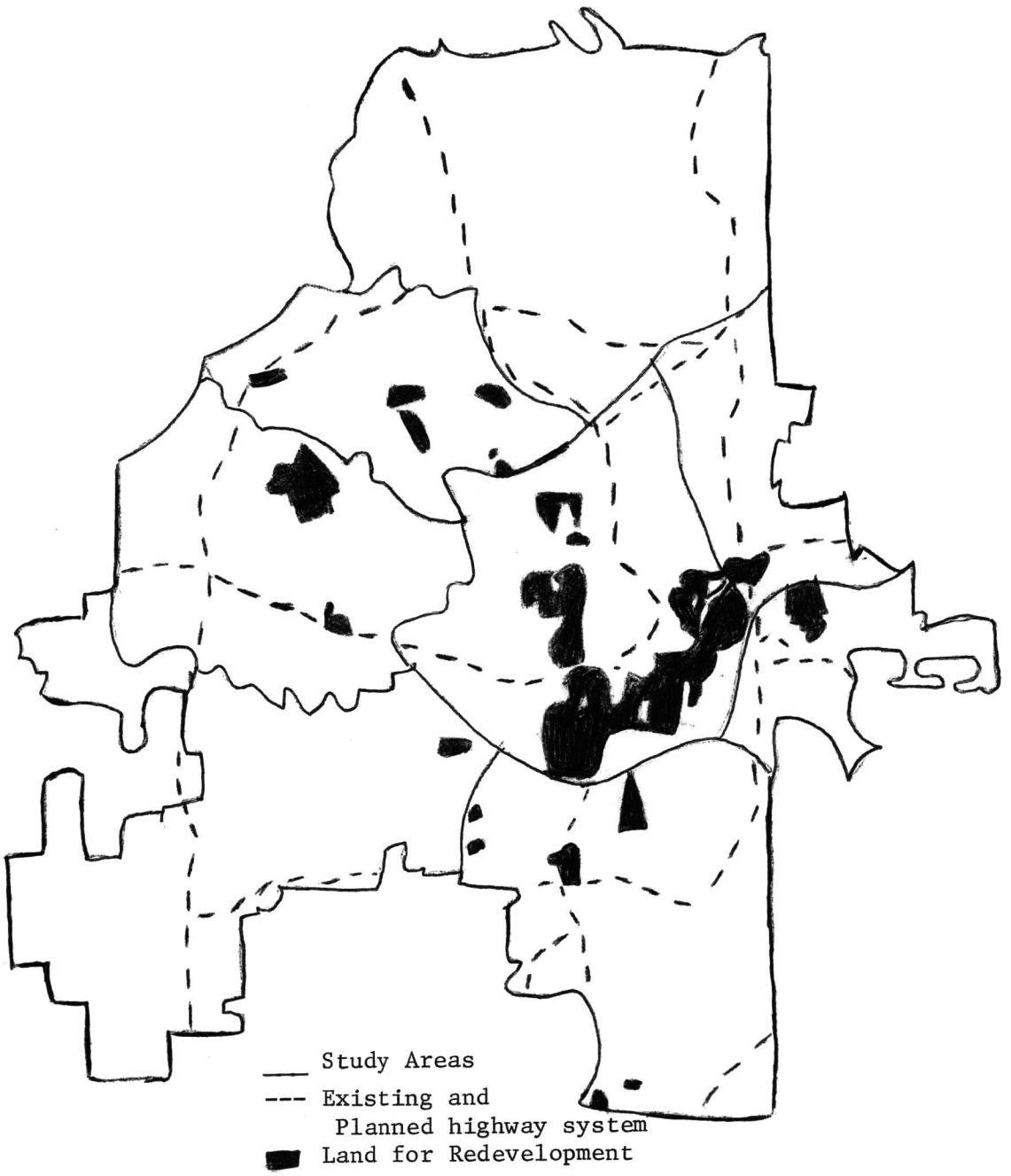
ATLANTA PLANNING STUDY AREA
AND SUB-AREAS



SOURCE: 1983 Land Use Plan

FIGURE 8

LAND FOR REDEVELOPMENT 1983



SOURCE: 1983 Land Use Plan

the accessibility of the location to certain other activities in the city.[1] The BOND Community (Bass Organization for Neighborhood Development), a sub-area in the northeast study area, is located directly east of the central core study area (see Figure 7). This community has both a thoroughfare plan and a plan for redevelopment for 1983 because of its accessibility to the central core area. The formation of the community had two motivations; the first stemmed from the fact that the community had been deteriorating for a number of years. The second motivation came from the awareness that the State Highway Department was going to alter land uses in the community by building two expressways and an interchange. (See Figure 9.)

Currently the BOND Community is a residential area, having as much low-density residential land as there is high-density residential land, with other land uses scattered throughout the community (except for land utilized for industry located on the west boundary)(see Figure 10). The unmarked sections in the illustration are lands cleared for highway construction. BOND travel-ways, serving through traffic, are located on the boundaries with one through street located in a north-south direction.

Figure 11 is an illustration of the 1983 proposed land uses. This proposal indicate recommendations for a more specialized distribution of land uses, with recommendations for high residential density. Residential densities would be altered by planned redevelopment, and life styles could possibly change. Low density is a concept, used by the Planning Department, referring to a residential dwelling unit, composed of single-family detached houses at an average density of six units per acre

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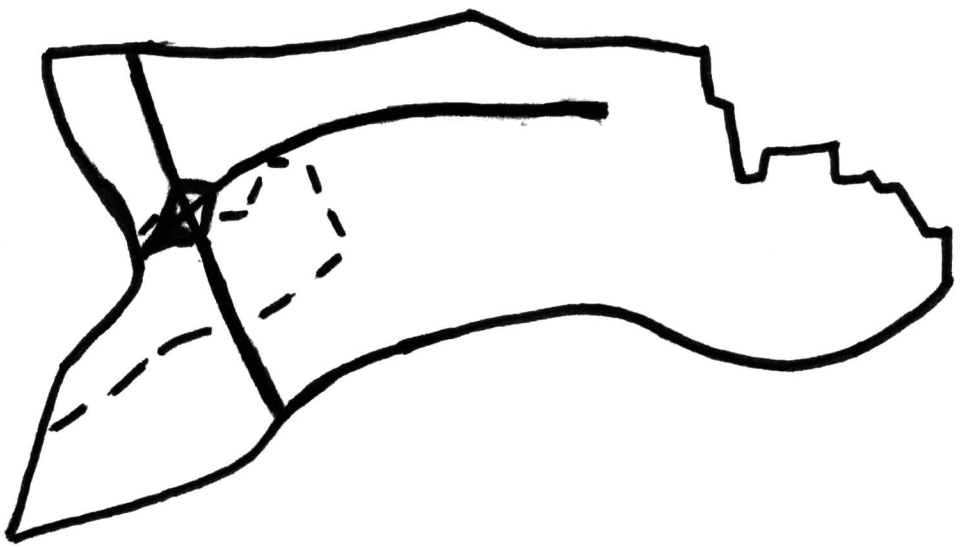
[1]Chapin, Jr., Urban Land Use Planning, p. 339.

FIGURE 9

THE BOND COMMUNITY



Land for Redevelopment

Proposed highways and interchange

SOURCE: Planning Atlanta: 1970

FIGURE 10

CURRENT LAND USE IN THE
BOND COMMUNITY

Low Residential Density

High Residential Density

Open and Public Land

Commercial

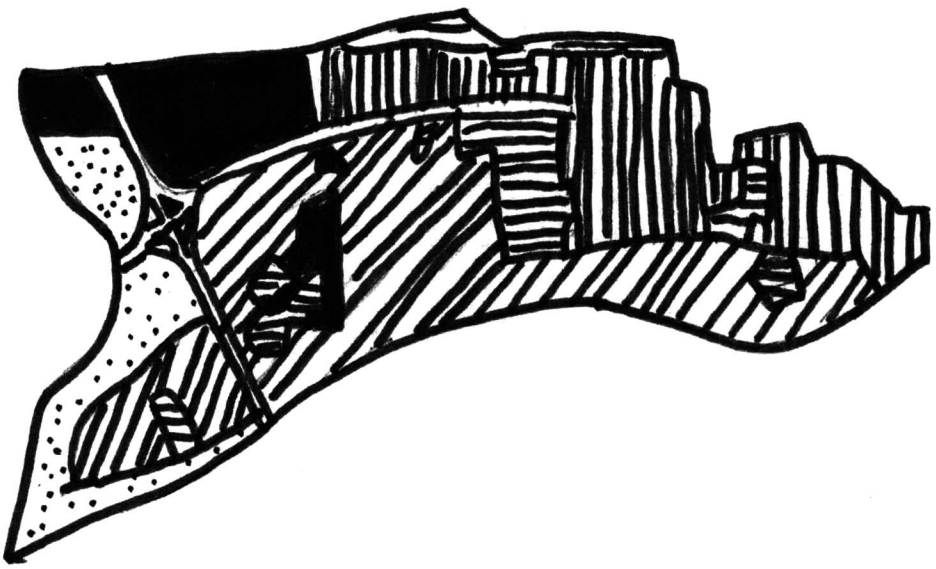
Industrial

Land Cleared for Proposes Highway
or Flood Hazard

SOURCE: Planning Atlanta: 1970

FIGURE 11

1983 LAND USE PLAN FOR
THE BOND COMMUNITY



Low Residential Density

High Residential Density

Open and Public Land

Commercial

Industrial

SOURCE: Planning Atlanta: 1970

or less. High density refers to residential areas characterized by the multi-family uses at an average density of sixteen and forty units per acre.[1]

The proposed highway plan would increase accessibility into the area, causing the conversion of residential to non-residential development. The plan would alter commercial land use making it almost impossible to procure shopping facilities without traveling. Land use for commercial and industrial development would increase employment opportunities, thus altering traffic patterns throughout the area. High density planning causes tremendous population growth, congested traffic and crowded living conditions.

Part of the redevelopment plan for the BOND Community is to develop a viable transportation system that will accommodate the needs of the community. The principle transportation needs of the community are (according to an interview survey):

1) An efficient public transit system (MARTA has made a recommendation for a rapid transit rail to be located on the north boundary of BOND)

2) Thoroughfares serving primarily through traffic

3) Local major streets providing internal neighborhood travel-ways between local traffic generators, or access to the rest of the Atlanta area.[2]

The main objective of transportation is to achieve a balance of accessibility in accordance with the land use. The transportation plan should serve and complement the land use plan-not the reverse. A transportation plan should provide the maximum capacity for through street

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[1]Planning Atlanta: 1970, (Atlanta, Georgia: Department of Planning, 1970), p. 1.

[2]BOND Community Development Committee Report.

traffic and a public transit system that will provide a higher degree of accessibility throughout the Atlanta area without local neighborhood destruction. The present transportation system in and around the BOND Community is principally automotive-oriented. The 1983 transportation plan is oriented towards generating more traffic by the automobile, with emphases on the utilization of the new highway.

The residents of the BOND Community are working together to reserve the trend of deterioration in housing by organizing restoration committees. BOND has developed a community plan representing what the people would like to see for their community in the areas of land use, transportation and community facilities.[1] A Task Force on Urban Expressways has evolved from a community committee organized to oppose the planned expressway.[2]

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[1] BOND Community Information Pack, (Atlanta, Ga.: Bass Organization for Neighborhood Development, 1972).

[2] "Join to Oppose Toll Road Legislation," The Community Newspaper Vol. I, No. 11 (Atlanta, Georgia: BOND Community Task Force, January 24, 1972), 5.

CHAPTER IV

CONCLUSIONS

The history of the road has been that of growth. The growing need for communication and trade led to the development of a road system to serve purposes other than those for the local community. Increased utilization of wagons and carts also added impetus to road construction. Financial aid from the federal government had and is continuing to have the most significant impact upon road development. The advent of the motor vehicle along with industrial and technological development have been the most influential factors determining the growth of cities and the highway system.

> Motorized transportation has greatly influenced the area of urbanization and the radius of travel for the resident. The time and distance limitations that once restricted the location of business and residential development have been substantially removed. Urban growth that was once compelled to concentrate at the hub and along the rail spokes leading to the center is now free to spread in every direction along the roads that have become the giant skeleton of the new metropolis.[1]

G. Lloyd Wilson, author of Transportation and Communication, believes

> The growth of highway systems in the United States is both the cause and effect of the development of motor transportation. The advent of the self-propelled road vehicles created a demand for improved roads, and the construction of modern surfaced highways encouraged

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[1]Wilfred Owen, The Metropolitan Transportation Problem, (Washington, D. C.: The Brookings Institution, 1966), p. 26.

> the production and facilitated the development of motor vehicles.[1]

Patterns of land use, population growth, employment location and residential choice have all been influenced by motor transportation.

The purpose of transportation in the United States, according to Lewis Mumford, has been that of increasing the number of cars, to enable motorist to go longer distances, to more places, at higher speeds, thus making it an end in itself.[2] The federal government has perpetuated this trend by funding ninety percent of highway construction. Highways have been created to serve cities that are already overcrowded, thus tempting public transit users to use the automobile due to new highway accommodations. Mumford says, " a good transportation system minimizes unnecessary transportation; and in any event, it offers a change of speed and mode to fit a diversity of human purposes."[3] Instead, the transportation system in the United States has made it necessary to travel, leaving little or no alternatives for people without automobiles.

Transportation in Atlanta, Georgia is a perfect example of a highway-oriented transportation system. The Atlanta highway system developed out of the need to accommodate the growth of automobile ownership. The Atlanta Area Transportation Plan was based upon the assumption that highways are catalyst in shaping land use patterns and planned economic development, thus becoming stabilizers for long range land use patterns.

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[1]G. Lloyd Wilson, Transporation and Communication, (New York: Appleton-Century-Croft, Inc., 1954), p. 424.

[2]Lewis Mumford, The Highway and the City, (New York: New American Library, 1963), p. 246.

[3]Ibid.

This is not the case in Atlanta. The highway acts as a stabilizer only if there are other modes of transportation to accommodate diverse travel needs. The mistake the AATS made was developing a plan specifically for the automobile. If other modes of transportation had been considered along with highway development the need for a comprehensive transportation plan would not exist today.

A comprehensive plan should include diverse modes of transportation that would increase the accessibility of work place and public services for all dispersed urban communities. Atlanta's 1983 land use plan is focused primarily on increasing accessibility to the central business district. This plan is based upon the same assumptions that were made in 1946. Planning using twenty year old assumptions has been the basic cause of traffic congestion. Atlanta's major commercial land uses have always been located at the central core and it has been found that commercial uses of land are the greatest traffic generators.

If a community is in close proximity with the central business district there is great possibility for commercial and industrial development for the area. Development would increase capacity efficiency for the central business district, such is the case for the BOND Community.

"The primary objective of the AATS in 1968 was to create a functional relationship between transportation planning and urban growth."[1]

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[1]Atlanta Area Transprtation Study, A Report on the Development of a Trip Distribution Model, (Georgia: State Highway Department, Division of Highway Planning Section in Cooperation with U.S. Department of Transportation, Federal Highway Administration, Bureau of Public Roads, May 1968), p. 1.

Consequently, the objective (the same as 1946) will cause the need for comprehensive planning in the future. Transportation planning in Atlanta has been based primarily on traffic surveys, providing descriptions of the extent and nature of the movement of persons and goods. Traffic surveys do not explain the factors that produce these movements. Explanations are bound up in the land use arrangements of the city and the nature of activities in the various use areas. Transportation planning for the city of Atlanta has been focused on fostering the greatest economic potential.

> ...urban transportation planning requires sufficient and timely information about change in the spatial structure of economic and social activities within the metropolitan area.[1]

Atlanta lacks research and development in the planning process to make viable solutions for its transportation system and community development.

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[1]K. Dueker and F. Horton, Information Systems for Urban Transportation Planning Process, Technical Report No. 2, (Center for Urban Transportation Studies Institute of Urban and Regional Research, University of Iowa, June 1971), p. 34.

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